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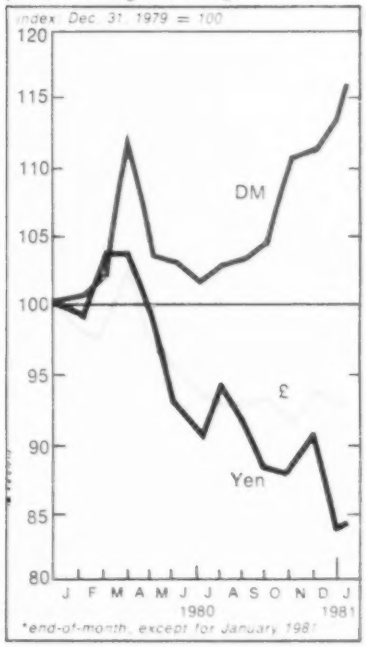
The Outlook For the Dollar

The dollar's strength over the past several months clearly reflects the unusually high differentials between interest rates in dollar markets and the money markets of other major currencies. These differentials are expected to diminish, and the dollar is expected to weaken as U.S. interest rates recede. There is little agreement, however, as to the timing or magnitude of this decline—or the potential for subsequent recovery. As a result, the exchange markets have been very nervous, with significant volatility in rates on a day-to-day basis.

Shifts in the U.S. dollar's value
(units of foreign exchange/dollar)*



*end-of-month, except for January 1981

In considering these uncertainties several points are worth stressing. First, given the outlook for small to moderate change in the current-account positions of the major economies, exchange-rate movements this year are likely to continue to be dominated by changes in interest-rate differentials. Second, the likely fall in U.S. interest rates in the first half of the year, although deep, is unlikely to match the decline of last spring. The prospective weakness of the U.S. economy in early 1981 shows no signs of coming close to the free-fall experienced in the second quarter of 1980. Third, upward pressure on U.S. interest rates is likely to develop in the second half of the year. The economic growth recovery projected for that period implies an acceleration in the demand for money and credit, and there is no reason at this time to doubt the Federal Reserve's commitment to restraining inflationary expectations by keeping monetary growth under control.

The outlook for the dollar implied by this view of the major elements underlying exchange markets is for moderate weakness over much of the first half of the year followed by recovery. The swings in key rates over the course of the year should show somewhat less amplitude than in the year just past even if no significant change is presumed in the Federal Reserve's operating procedures. In terms of trade-weighted indexes, as in 1980, the foreign-exchange value of the dollar at yearend 1981 could well show a modest improvement over its level at the beginning of the year. There is, however, one major caveat in the outlook: that the exchange markets do not come to perceive the net budgetary implications of the fiscal strategy adopted by the Reagan Administration as inconsistent with the continuation of the Federal Reserve's current strategy. In such an event, an extended period of dollar weakness would ensue.

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Italian recession continues, with real GDP decline seen for 1981.

Italy's economy contracted sharply last summer with third-quarter real GDP declining at a seasonally adjusted annual rate of 10%. Although the economy apparently stabilized in September and October, leading indicators still point downward, and year-over-year inflation remains above 20%. All in all, real GDP growth in 1980 is unlikely to have exceeded 3.5%. The Forlani government recently reinstated gasoline price rises, doubled the automobile tax, and postponed income tax reductions for the lowest paid. The $2.6 billion that these measures hope to net is earmarked as aid to the earthquake zone. With the recession expected to continue at least through the first quarter of 1981—and probably through the first half—fiscal reflation can be expected, which should spur economic recovery in the latter part of the year. Even so, the negative carryover from 1980 will mean that real GDP in 1981 as a whole will likely decline by 1%-2%.

Spanish economy weakened in 1980; little hope of recovery in 1981.

Last year marked a watershed for the Spanish economy. Real economic growth slowed to an estimated 0.5%, and the current account shifted into deficit by $4.8 billion after posting a surplus of $1.2 billion in 1979. The year-average inflation rate in 1980 was 15.5%, and the peseta declined in value by more than 11% in effective terms. Moreover, unemployment now exceeds 12% of the labor force. This year offers little hope of substantial improvement in view of renewed oil price hikes, depressed export markets, and the prospect of another large public-sector deficit. Economic growth may recover slightly, to a rate of about 1%. But with the expectation of at least a $2-billion increase in the oil-import bill, it is difficult to envisage a current-account gap of much less than $5 billion. This implies that the Spanish will continue to be active borrowers in the international capital market.

Greek economic growth was flat in 1980; only moderate improvement forecast this year.

Short-term economic prospects for Greece—the European Community's newest member—are mixed. Rising inflation and a widening balance-of-payments deficit prompted the authorities to tighten economic policy in early 1980. As a result, industrial output declined sharply around midyear and import growth slackened, trimming the current-account deficit for the January-October period to $1.44 billion, as against $1.54 billion in the year-earlier period. The domestic economy, however, is estimated to have shown no real growth last year, and the yearend inflation rate remained above 24%. More worrisome is the 27% growth in manufacturing wages in the first half of 1980. An end to inventory liquidation and a reflationary 1981 budget should bring about real economic growth of some 1.5%-2.0% this year, but only at the cost of little easing of inflation and a widening in the current-account deficit to about $2.2 billion-2.4 billion.

Canada signals economic recovery, but its strength is likely to be minimal.

Canadian real GNP increased at a 1.6% annual rate in the third quarter of 1980, after two quarters of contraction, raising hopes of an end to recession. Industrial output rose 0.6% from September to October, with manufacturing orders up 1.5% over the same period. And the unemployment rate dipped to 7.3% in November from 7.6% in the preceding month. The pick-up in economic activity has been fueled largely by a sharp rise in exports. These developments point to positive real economic growth this year, but the recovery is unlikely to be strong. Interest rates are high—in response to U.S. rate levels—and may dampen investment and housing this year. Furthermore, the year-over-year rate of inflation has accelerated, rising to 11.2% in November from 10.9% in October. And slow growth for the world economy in 1981 will likely constrain further large export gains.

Foreign investment in Mexico soared last year.

Foreign investment in Mexico during 1980 is likely to have set a record, despite continuing stringent limits on the share of foreign equity ownership. New foreign direct investment in the first half of last year totaled $784 million, compared with some $280 million in the year-earlier period and with an annual average of $590 million for the period 1973-79. The stock of foreign investment has also risen dramatically. Most recent data—for the year 1978—put total outstanding investment at $4.7 billion, up 45% from 1976 when investment dropped in the wake of a large peso devaluation. Of the total outstanding investment, about 70%

is held by U.S. companies, and nearly 80% of all investment is in the industrial sector. It is in this sector—especially in auto parts and petrochemicals—that investment is expected to grow most rapidly in 1981.

Japan achieves impressive results in reducing inflation.

Japan appears to be winning the battle on inflation. The rate of wholesale price increase declined from its April peak of 24% to a year-over-year rate of 11.8% in November, and consumer price rises eased from their peak of 8.9% in August to 8.4%. The forecast for fiscal 1981-82, beginning in March, is for wholesale price inflation of only 4% and consumer price inflation of 5%, down sharply from the current fiscal year's estimated 14% and 8.5%, respectively. The reasons for the recent easing of inflationary pressures and for the bullish outlook are relatively moderate oil price increases, a restrictive monetary policy that has dampened inflationary expectations, and yen appreciation. Moreover, overall economic prospects are favorable, as the impending labor contract negotiations are expected to yield nominal wage increases of some 7%-8%, coincidental with productivity growth of about 7%. The resulting real wage rises are thus likely to boost consumer spending, which should lead the anticipated Japanese economic recovery.

Bahrain's economy signalling recovery.

The Bahraini economy's seesawing of the last half decade has been characterized by overheating in 1976-78, slowdown in 1979, and more recently, gradual recovery. Government capital expenditures, so critical to overall economic activity, have been restored to their 1978 level after a 35% cut in 1979. At the same time, higher oil prices and dampened import demand have offset declining oil output and shifted the current account into surplus in 1980—the first surplus in over a decade. The impact of higher oil revenues on the domestic economy has been limited, however, as the authorities have sought to contain inflationary pressures. Prospects for 1981 and beyond appear encouraging as the business community has overcome regional political uncertainties to a large degree. The $1-billion causeway to Saudi Arabia is scheduled to begin construction before the end of the year, which will entail significant spillover for the domestic economy. And Bahrain's industrial base continues to expand, with new aluminum, petrochemical, and iron-pelletizing projects about to be implemented.

Copper prices likely to remain soft in face of weak demand and inventory build-up.

Copper prices are unlikely to rise much above their present levels in 1981 because of weak demand and high production levels. World demand for copper is expected to be relatively flat this year as high interest rates and economic recession dampen auto sales and housing construction in the United States. European and Japanese demand will be similarly weak, owing to slowdowns in industrial output and overall economic growth. Although world copper demand is only expected to grow by between zero and 1% in 1981, production appears likely to rise by more than 5%. As a result, inventories will be built up in 1981—for the first time since 1977—to an estimated level of 1.4 million metric tons, 29% higher than in 1980, but still below the 1977 level of 2 million tons. With copper prices now roughly equivalent to the variable cost of production, approximately 80¢ per pound, and the anticipation of a build-up in producer inventories, prices are expected to remain about where they are now for much of 1981.

Export credit agreement's future uncertain.

The Arrangement on Export Credits adhered to by 22 OECD-member nations was dealt a potentially fatal blow in Paris last month. The informal accord—implemented in April 1978—sets minimum interest rates and maximum repayment terms for government-backed export credits. Although the rate minimums were boosted in July (to 7.75%-8.75% for over-5-year credits), they are still far below market levels, entailing heavy subsidies for countries willing to lend at the minimums. The United States has spearheaded the effort to boost rates and key them to money market movements, but opposition from within the European Community deadlocked the most recent negotiations. It now remains to be seen how rigorously the U.S. policy of violating the Arrangement's maturity limits is carried out and whether it precipitates other violations. Optimists are hoping for a consensus at the next scheduled meeting in May.

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Sales Dip Portends Renewed Downturn

Statistics on the yearend buying behavior of American consumers offer the first concrete sign that the U.S. economy may once again be weakening. Department of Commerce figures released last week showed a dramatic and unexpected 1.3% decline in the seasonally adjusted value of monthly retail sales in December. This was in sharp contrast to the hefty 1.6% increase recorded in November and marked the first drop in retail trade since last May. The direction of the change—and its magnitude—caught the financial markets off guard, but lent support to the suspicions voiced by a number of economists in recent weeks that the economy is poised for a renewed downturn.

The end-of-year runup in interest rates strongly inhibited consumers' durable-goods purchases, particularly in the automotive sector where sales plunged 7.4%. This was clearly the dominant influence in the decline of the total sales figure, as sales of nondurables—extremely weak despite a surge of last minute Christmas shopping at department stores—remained essentially unchanged from November levels. Adjustment for price increases during December indicates that retailers suffered an even more severe falloff in sales volume.

Whether the latest retail trade report truly augurs the beginning of another recessionary dip in the economy remains to be seen. One month's statistics by no means establish a trend. Indeed, the initially announced estimates of one month's retail sales are based on a small sample of early reports from retailers, and are almost always revised in subsequent months as more information becomes available. And sometimes those revisions are substantial. Moreover, the Federal Reserve reported last week that industrial production rose 1.0% in December, suggesting continued real growth in the economy. If the retail sales numbers are borne out, however, the industrial output figure points to the possibility that some unwanted accumulation of business inventories may have occurred. And with interest rates still high, this would presage production cutbacks in the coming months if consumer spending remains weak.

There is, however, corroborating evidence to support the economic significance of the December retail sales figures. For one thing, the striking decline in the money supply in December reinforces the Commerce Department's report that retail spending was off during that month. In addition, indexes of how consumers regard the future showed consumer confidence down sharply in the final month of 1980, after six months of increases, and that buying plans were being postponed for autos, houses, major appliances, and vacations.

The recent statistics on consumer credit also support the view that consumer spending has been cautious. Consumer credit outstanding increased at an annual rate of only 3% in both October and November, according to another government report released last week. Preliminary indications suggest a modest rise in December as well. This contrasts with an annual growth rate in personal income for the last three months of about 13%. These data indicate that consumers have continued to reduce the burden of their debt and imply a reluctance to incur additional debt to finance consumption.

The evidence supporting weakness in spending may prove significant in determining the future course of monetary policy and interest rates. While the money supply fell sharply from mid-November to late December—M1-B (currency plus checkable deposits) declined at an annual rate of about 8½% in December—there was skepticism on the part of analysts as to whether this drop signalled anything about the economy, or was merely a statistical aberration soon to be reversed. The decline in retail sales, however, has reinforced the notion that the recent drop in money growth was indeed "real." This in turn has heightened the market's perception that interest rates will move down further in coming months.

The U.S. Economy

The Federal Reserve is certain to have taken careful note of the retail sales figures. A number of members of the Federal Reserve's Board of Governors have been skeptical of consensus forecasts that the economy was or would soon be weakening—especially given the poor forecasting performance of the economics profession in general and of the Board staff in particular. Thus, in making policy decisions, the Board has tended to place greater weight on recent history than on forecasts. In this regard, as noted earlier, the December retail sales figures offer the most solid evidence to date that such weakness may have arrived, especially when combined with the recent behavior of the money supply. It may take more than one month's figures, however, to convince monetary policymakers that a sustained economic slowdown has begun.

If consumer spending does remain weak in coming months, there should be a concomitant depressing effect on the economy as well as on the demand for money and credit. This in turn would put significant downward pressure on interest rates. And in the face of declining interest rates consumer spending may be stimulated. Still, there are other economic influences—such as continued high inflation, increasing energy costs, higher social security taxes, and bearish real wage prospects—that may prevent any consumer spending revival strong enough to support more than a listless economic recovery.

Africa and Middle East Bimonthly Survey of Business and Finance

COUNTRIES	CURRENT BUSINESS CONDITIONS	EXPORTS: 6 months ending	EXPORTS: change from year earlier	GNP IN 1979: in billions of dollars	GNP IN 1979: per capita	BALANCE OF PAYMENTS: latest data	BALANCE OF PAYMENTS: reserves (less gold) in million $	BALANCE OF PAYMENTS: 12-month change	BALANCE OF PAYMENTS: months of imports covered	BALANCE OF PAYMENTS: use of IMF credit, millions of dollars	BALANCE OF PAYMENTS: current influences on payments	MONEY AND BANKING: 12-month changes: latest data	MONEY AND BANKING: 12-month changes: consumer prices	MONEY AND BANKING: 12-month changes: latest data	MONEY AND BANKING: 12-month changes: money supply(M1)	MONEY AND BANKING: exchange rate in U.S. dollars, January 14, 1981	MONEY AND BANKING: change from year earlier	MONEY AND BANKING: current monetary conditions	COUNTRIES
Algeria	Budget for 1981 projects oil revenue of $12.2 billion, up 45% from 1980.	Sept.	+ 50%	24.6	$1,374	Nov.	3,632	+ 64%	5.1	0	Agreement with British Gas Corp. on LNG export price of $4.60/million BTU.	Dec. '79	+ 12%	Dec.'79	+ 18%	.2550	+ 26%	European Investment Bank lends $26 mn. for power projects.	**Algeria**
Congo	Increasing oil output and liberalized investment code encourage Western business.	Dec. '78	+ 15%	0.1	635	July	90	+ 718%	4.5	9	Higher oil receipts in 1980 likely to have produced small payments surplus.	Apr.	+ 8%	July	+ 46%	.004436	— 10%	Payments on arrears and for imports improve.	**Congo**
Egypt	Sharp rise in export revenues underlies continued economic growth and enlarged payments surplus.	June	+ 74%	16.4	400	Sept.	1,117	+ 247%	3.4	226	Suez Canal expansion scheme completed; 1981 revenue of $1 billion expected.	July	+ 26%	Sept.	+ 25%	1.4360	+ 1%	Bank credit to public sector growing more slowly.	**Egypt**
Ethiopia	New guidelines on investment by foreign firms and on joint ventures to be announced.	June	+ 16%	3.1	105	Oct.	124	— 18%	2.1	47	Drop in coffee's share of exports shows progress in export diversification.	Aug.	+ 2%	Apr.	+ 16%	.4870	+ 1%	Total reserves fell sharply in November.	**Ethiopia**
Ghana	Widespread product shortages persist in face of government's belt-tightening measures.	Dec.	+ 8%	4.3	386	Nov.	223	— 20%	2.9	63	Import restraint holding external accounts in surplus.	July	+ 68%	Aug.	+ 38%	.3640	—	IMF credit of $130 million under negotiation.	**Ghana**
Kenya	Stiffer import controls certain to dampen economic growth.	June	+ 39%	6.0	400	Nov.	502	— 21%	3.4	168	Issue of import licenses and foreign-exchange control approvals tightened.	Sept.	+ 12%	May	+ 18%	.1405	+ 3%	Bank of Oman to open branches.	**Kenya**
Morocco	Contract awarded for a $176-million steel plant at Nador.	June	+ 46%	15.3	788	Oct.	205	— 43%	0.6	341	Higher prices boost phosphate export revenues.	Aug.	+ 10%	Sept.	+ 10%	.2390	— 11%	A $170-million Euroloan finalized for phosphate projects.	**Morocco**
Nigeria	Agriculture and industry (especially iron and steel) given priority in 1981 capital budget.	Aug.	+ 56%	50.7	625	Oct.	10,232	+ 132%	10.8	0	Export diversification lags; oil still accounts for 95% of total receipts.	Mar.	+ 12%	June	+ 15%	1.9200	+ 6%	Loanable funds for industry increased.	**Nigeria**
Senegal	Real GDP likely to have contracted in 1980, owing to austerity and groundnut crop failure.	Dec.	+ 9%	2.2	407	Sept.	10	— 58%	0.1	75	Lower export receipts widened 1980 current-account gap to $400 million.	Sept.	+ 6%	May	+ 4%	.004436	— 10%	Large aid inflows from France continue.	**Senegal**
Sudan	Agricultural output expected to rise, spurred by expanding cotton and sugar production and rains.	June	+ 113%	9.1	508	Nov.	82	+ 1%	3.3	358	Current-account deficit in 1981 likely to match last year's $950 million.	June	+ 32%	Sept.	+ 27%	2.0140	+ 1%	Payments arrears estimated at $1.3 billion.	**Sudan**
Tanzania	Producer price rises and involvement in Uganda widen budgetary deficit.	Dec.	+ 9%	4.6	267	Oct.	48	— 16%	0.5	132	Drop in coffee and cocoa prices widens trade gap.	June	+ 28%	May	+ 33%	.1235	+ 1%	Credit tightly controlled.	**Tanzania**
Tunisia	Government plans to double phosphate output in the 1980s.	June	+ 38%	7.0	1,096	Nov.	706	+ 13%	2.8	0	Exports up 42% in first seven months of 1980.	Sept.	+ 9%	Sept.	+ 18%	2.4675	+ 2%	Arab Fund lends $12.8 million for irrigation project.	**Tunisia**
Zambia	Low copper prices and rising costs dampen incentives for capacity expansion.	Dec.	+ 4%	3.2	572	Oct.	51	— 55%	0.6	423	Current account swung into deficit of $235 million last year.	June	+ 14%	July	+ 14%	1.3200	+ 3%	Decline in foreign-exchange holdings continues.	**Zambia**
Iraq	War causing fuel shortages, but stocks of food and other consumer goods reported ample.	Sept.	+ 61%	23.3	1,875	n.a	—	—	—	0	Oil exports by pipeline via Turkey and Syria not yet resumed.	Sept.'79	+ 8%	n.a.	—	3.4015	—	Credit generally available.	**Iraq**
Kuwait	Official cost-of-living index rose at a 10% annual rate in first-half 1980, versus 5% year earlier.	Sept.	— 2%	23.3**	18,330	Nov.	3,982†	+ 47%	9.2	0	Oil price reportedly raised 12.7% to $35.50 per barrel.	Mar.	+ 8%	Sept.‡	+ 10%	3.6860	—	Money supply expanding steadily.	**Kuwait**
Qatar	A $675-million petrochemical complex came on-stream in late December.	Sept.	+ 44%	4.5*	22,500	June	346†	n.a.	—	0	Oil price reportedly raised 12% to $37.42 per barrel.	n.a.	—	June‡	+ 18%	.2750	+ 1%	Money supply growing more rapidly.	**Qatar**
Saudi Arabia	Several contracts awarded foreign firms and joint ventures in education, health, and infrastructure.	Sept.	+ 76%	74.8***	11,510	Nov.	24,616†	+ 33%	12.3	0	Oil price boosted $2 per barrel to $32, retroactive to November 1.	Mar.	+ 2%	June‡	+ 36%	.3005	+ 1%	Money supply growth accelerates.	**Saudi Arabia**
United Arab Emirates	Abu Dhabi undertaking major new oil and gas exploration projects.	Sept.	+ 47%	13.8*	19,435	Nov.	1,950†	+ 78%	3.7	0	Abu Dhabi cut oil production ceiling by 80,000 bpd, or 6.3%, in January.	n.a.	—	Sept.	+ 21%	.2725	+ 2%	Federal Real Estate Bank capitalized at $545 million.	**United Arab Emirates**

Africa

Middle East

1978 FY 1979/80 FY 1978/79

†Excluding state reserves

‡Private sector only

World Interest Rates

market rates of Jan. 14, 1981; bond yields as of Jan. 9, 1981

in percent per annum	U.S.	Canada	Britain	Belgium	France	Germany	Italy	Netherlands	Switzerland	Japan
Central Bank Discount Rate	13.00 penalty-large banks 16.00	17.00	14.00	12.00	9.50	7.50	16.50 penalty rate 19.50	8.00	3.00	7.25
Day-to-Day Money	19.00 Jan. 15	17.50	13.50*	7.75	10.875	9.15	17.50	9.125	1.50	9.0625
Treasury Bills 91-day, Middle Rates	15.03	16.70	12.9375*	12.50	n. a.	n. a.	14.50 76-day	no dealing	no market	5.875 2-month
Commercial Paper prime, 3-month, asked	16.50 finance paper	16.25 finance paper 15% tax w/h	12.76*	11.80 Certified	11.625 Interbank	no market	no market	no market	no market	not traded
Bankers' Acceptances 3-month, asked	16.75	16.65 15% tax w/h	13.75*	11.80 Certified	not traded	9.90	20.35	no market	4.50	no market
Government Bonds Long-term, new and old issues, average yield	11.84	12.625	13.63	10.465 20% tax w/h	13.77	8.98	16.18	10.25	4.66	8.622
Industrial Bonds prime, long-term, new and old issues, average yield	12.75 Aa Industrials	13.625	14.22	14.97	14.68	9.06	16.43	11.51	5.74	7.14
Bank Short-Term Rate to Best Borrowers (prime rate)	20.00	17.75	15.00*	15.75	13.85	11.50	21.00 ⅛ quar'ly fee on outstdng.	11.00	6.00	7.50
Bank Time Deposits 3-month	16.50 Cert. of Dep.	16.00	14.50*	12.35	11.625	9.25	10.75	9.625 large deposits	5.5625 residents only	5.00 20% tax w/h
Eurocurrencies 3-month, asked	18.5625	no market	14.50	no market	11.500	9.1250	no market	9.50	5.4375	no market
Exchange Rates—in U.S.$ rates floating against the $	—	.8390	2.4025	.0310	.2170	.5025	.001055	.4620	.5546	.004929
Forward Exchange Cover 3-month, in percent p.a. *D* = discount, *P* = premium	—	1.50 *P*	4.00 *P*	6.25 *P*	7.00 *P*	9.00 *P*	.875 *P*	9.00 *P*	12.25 *P*	9.875 *P*

Eurodollar Deposits
(London, interbank, bid)

Jan. 15

7-day	19.875
1-month	19.8125
3-month	18.75
6-month	17.125

International Arbitrage
(3-month, hedged) + *in favor of U.S. dollars*

U.S.-U.K. Treasury Bills	n.a.
U.S.-Canada Treasury Bills	−2.29
U.S.-Canada Finance Co. Paper	−1.02
Eurodollars-U.K. Local Auth. Deposits	n.a.

Eurobonds
(average yield on recent straight debt issues)

U.S. Dollar Bonds	
7 yrs. and under	13.75
Over 7 yrs.	13.50
DM Bonds	
7 yrs. and under	9.25
Over 7 yrs.	9.375

Gold Price

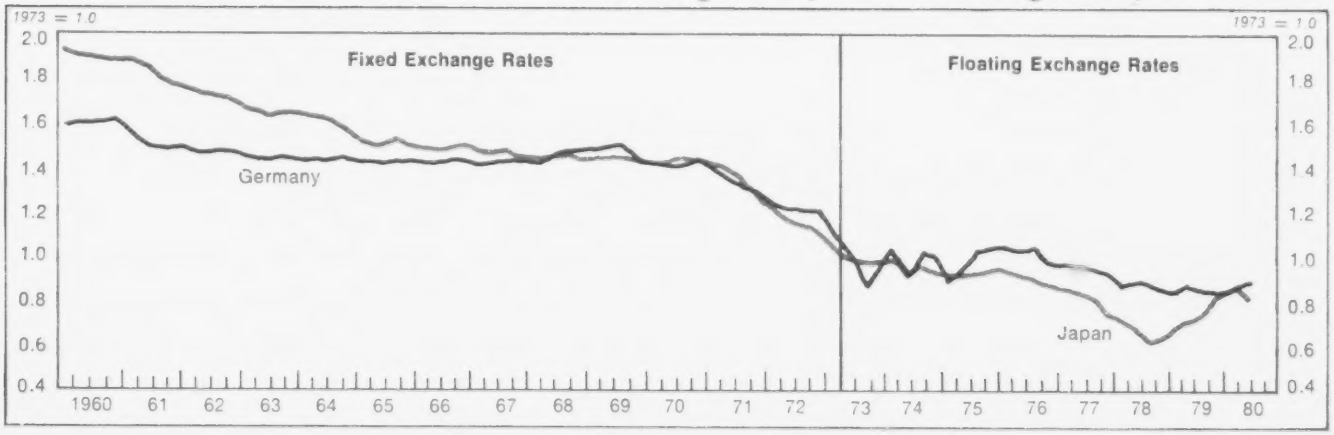
London afternoon fixing

556.50
(per fine ounce)

The above interest rate quotations refer to the past week and may not be construed as offers by The Chase Manhattan Bank. The quotations for Bank Short-Term Rate to Best Customers, while including customary commissions, reflect neither possible other fees nor varying compensating balance requirements.

* Market rates as of Jan. 7.

Exchange value of a U.S. basket of goods ("real" exchange rate)



Exchange Rates and PPP: Words of Caution

Perhaps the single most popular guide to foreign-exchange forecasting, especially over long periods of time, has been the theory of Purchasing-Power Parity (PPP). This venerable doctrine, linking currency values to domestic price levels, has been employed in recent modern theories of rational expectations and international monetary adjustment, serving as a rather sophisticated and presumably powerful approach to the analysis and forecasting of exchange-rate movements (see *International Finance*, July 23, 1979, page 8). Useful as PPP may be as a very *general* guide, however, as a forecasting tool it is flawed. Recent empirical research indicates that even in the long run, PPP may not be as strong a theory as many forecasters would like to believe.

According to PPP, the exchange value of a currency is closely linked to its domestic purchasing power. The "absolute" version of the doctrine implies that, apart from short-run fluctuations, the exchange rate between the currencies of any two countries will equal the ratio of the two nations' price levels. That is, when the exchange value of sterling is, for example, $2.40 in U.S. dollars, then a standard basket of goods worth £100 in Britain costs $240 in the United States. While few economists would expect this relationship to hold in the short run, many believe it is a reasonable guide to currency prices in the long run.

A potentially more useful formulation of PPP for forecasting purposes is the "relative" version of the hypothesis, which states that the percentage *change* in the exchange rate should equal the difference in the rates of inflation between the two countries. If, for example, British prices rise 15% in a given year while U.S. prices increase by just 10%, then the relative purchasing power of the two countries' currencies would be preserved only if sterling lost 5% of its dollar value during the year—falling, say, from $2.40 to $2.28. At the new exchange rate of $2.28, the British and American baskets could still be exchanged on a one-for-one basis. That is, the "real" exchange rate between the two countries—the exchange value in terms of goods—remains constant when relative purchasing-power parity is maintained.

The relative version of PPP offers a simple guide for exchange-rate forecasting. Over the long run, currencies adjust in relative value to offset differential rates of inflation so that the trend level of the real exchange rate does not vary over time.

Although this hypothesis is generally accepted in the economics profession, empirical research conducted in the Chase Economics Group casts doubt on the validity of PPP, even in the long run. To test the doctrine statistically, the exchange value of a U.S. basket of goods—for an appropriate basket of the goods of other countries—was set at 1.0 for an arbitrary base year. If the hypothesis were strictly true, then this "real exchange rate" would show only short-run fluctuations, centered on 1.0, over a number of years. But this was not borne out by the statistical tests. Data were examined for the real exchange rates of several countries for two periods: the fixed-rate years of 1960 through early 1973, and the subsequent period of managed floating exchange rates. Contrary to relative PPP, the evidence suggests that the real exchange value of U.S. goods was not constant over time in either period.

The results for two countries, Germany and Japan, are shown in the chart at the bottom of page 6. Real exchange rates were calculated by deflating the U.S. Consumer Price Index by the CPI of the country in question and the dollar price of its currency. The price indexes and exchange rates were converted to a common base year of 1973 (the year of change from fixed to floating rates), and the real exchange rate was set at 1.0 for the base year. As the chart indicates, the real exchange value of U.S. goods for Japanese goods fell fairly steadily during the period 1960-73, losing almost half its worth. It has continued to fall since that time. Similar, although less striking, results are shown for Germany in both periods. Numerically, the U.S. real exchange rate drifted downward at a rate of 3.6% per year against Germany and 6.0% a year against Japan during the fixed-rate period. Statistical analysis confirms the impression given by the chart: There has been a long-term decline of the real exchange rate of the United States with respect to several countries, including Germany and Japan. These results thus cast doubt on the validity of PPP as a long-run relationship between exchange rates and prices, for periods of both fixed and managed floating rates.

The reasons for PPP's failure to hold have been attributed by some economists to "real", as opposed to monetary, disturbances. Examples of these disturbances are differential shifts in consumer preferences over time, or technological innovations and productivity changes at different rates in different countries. It may be the case that the decline in the real exchange value of U.S. goods stems from a long-term fall-off in U.S. productivity relative to that of Japan and Germany.

Whatever the reasons for the failure of PPP as a long-run theory of exchange rates, the research results indicate that forecasters should proceed with caution. Differential rates of inflation can still be viewed as a powerful influence on exchange rates; they simply do not explain everything.

W. Dayle Nattress

Underlying Currency Diversification

Today's well-integrated and highly efficient Eurocurrency markets are greasing the wheels of private-market currency diversification. Both borrowers and lenders of foreign currencies have begun to shift their portfolios into or away from U.S. dollars in the Euromarkets. Broad markets exist in short-term yen, deutschmark, Swiss franc, and dollar instruments, with less deep, but still highly developed, markets operating in sterling, French francs, and Dutch guilders.

Two influences are often cited as important in spurring currency diversification and, hence, the declining share of U.S. dollars in both lender and borrower portfolios: exchange rate instability and interest-rate differentials. Research by the Chase Economics Group indicates, however, that it is exchange-rate instability that is the prime stimulus to currency diversification, and that interest-rate differentials actually neutralize the exchange-rate stimulus to diversification.

Evidence of diversification is best illustrated with data from the Bank for International Settlements (BIS). The BIS collects data on the size of the Eurocurrency market with currency breakdowns available for a portion of the market. The data indicate that within the European reporting area (which excludes such offshore financial centers as the Bahamas, Bahrain, and Singapore), the U.S. dollar's share of Eurobank liabilities and assets has declined from slightly more than 70% in 1974 to about 65% today. Some qualifications do, however, bear mention. First, although much of the dollar's decline was concentrated in 1977 and 1978, there have been periods of increasing U.S. dollar share. Furthermore, the U.S. dollar share in all Eurocurrency markets is still about 75%-80%, since the dollar dominates heavily in several of the areas excluded from the European reporting area.

Nonetheless, there is no disputing that the dollar has lost ground in the diversification process. The fundamental reason for the decline in the dollar's share appears to be the switch away from the low-exchange-rate-risk environment of the 1960s when the dollar was at the center of the world monetary system. With flexible exchange rates and a much higher degree of foreign-exchange risk, diversification was the only prudent course for borrowers as well as lenders to pursue.

Although the volatility of exchange rates is a key factor in predicting currency diversification, research at Chase indicates that the direction of change in exchange rates (e.g., appreciation or depreciation) is of little importance. This is so because of interest-rate differentials. When a currency is expected to depreciate, its interest rate tends to rise. The differential compensates holders of the weakening currency. Thus, only unexpected, random currency changes are likely to stimulate diversification, since there is no interest-rate protection from such uncertainty—only risk reduction via portfolio diversification. Hence, it is the *frequency* of unexpected rate changes that spurs the currency holder to diversify.

Since foreign-exchange risk appears to be the chief influence on currency diversification, both on the asset and liability side, it is premature to associate automatically currency diversification with either currency weakness or strength. Relative predictability and stability are the critical issues. Thus, even with a stronger dollar, the increased risks associated with a U.S. monetary and interest-rate policy that is highly volatile and unpredictable may cause the dollar's share in the world financial market to erode further.

Bluford H. Putnam

Quarterly Euromarket Report

($ billion, end of period)

Total Market Size	**IIIQ/79**	**IVQ/79**	**IQ/80**	**IIQ/80**	**1978**	**1979**	**1980**
Gross Size (Claims)	1,041.5	1,110.7	1,117.4	1,205.6	893.1	1,110.7	1,300.0
Net Size (Claims)	630.0	665.0	675.0	735.0	535.0	665.0	785.0
U.S. Banks and Their Foreign Branches							
Total Liabilities to Foreigners	258.9	269.3	274.3	279.5	222.3	269.3	320.0
Liabilities to Private Nonbank Foreigners	65.3	65.8	67.7	69.6	57.8	65.8	75.0
Total Claims on Foreigners	316.7	328.9	324.7	344.4	281.8	328.9	390.0
Claims on Foreign Public Borrowers	39.6	41.5	40.9	41.2	34.3	41.5	45.0
Claims on Foreign Private Nonbank Borrowers	113.1	118.1	118.1	129.3	104.1	118.1	135.0

Note: Gross and net Eurocurrency market size definitions are those of the Bank for International Settlements (BIS). The difference between gross and net size is the interbank component. Net size includes transactions between banks in the Euromarket and: (a) official monetary authorities; (b) banks not participating in the Euromarket; and (c) nonbanks. U.S. bank and branch totals are net of transactions between parents and their foreign branches.

Source: Chase Manhattan Bank estimates based on BIS and national data sources.